

IN THE CLAIMS:

- 1. (Currently Amended)** An arrangement comprising:
  - an ATM switch fabric;
  - a controller associated with said ATM switch fabric for controlling operation of said ATM switch fabric,
  - a first I/O module, coupled to said ATM switch fabric and having a framer to which a protection line is connected;
  - a second I/O module, coupled to said ATM switch fabric and having a framer to which a service line is connected, said second I/O module being physically distinct from said first I/O module; and
  - a decision logic module within said first I/O module that, in response to applied stimulus, where said stimulus is taken from a set including said user-specified directives, state condition information of a the service line, and state condition information of a the protection line, develops signals that flow to said framer in said first I/O module and to said second I/O module to direct said service line to be in an active state or in a standby state and, correspondingly, to direct said protection line to be in a standby state or in an active state.
- 2. (Currently Amended)** The arrangement of claim 1 wherein said decision logic module is implemented within said controller.
- 3. (Currently Amended)** The arrangement of claim 1 where said decision logic module is implemented within said first I/O module, within said second I/O module, or partly within said first I/O module and partly within said second I/O module.
- 4. (Original)** The control module of claim 1 wherein said user-specified directive are taken from a set comprising a lock-out directive, a forced switch directive, a manual switch directive, or a release directive.
- 5. (Currently Amended)** The control module of claim 1 where said, state condition information of a the protection line corresponds to a degraded condition or a failed condition in said protection line, and state condition information of or a the service

line corresponds to a degraded condition or a failed condition in said protection line or a service line, respectively.

**6. (Currently Amended)** The arrangement of claim 1 wherein said second I/O modules is structurally similar to said first I/O module.

**7. (Deleted)**

**8. (Deleted)**

**9. (Deleted)**

**10. (Previously Presented)** The arrangement of claim 1 wherein said signals that flow to said framer in said first I/O module close the last-mentioned framer when a decision by said decision logic module is to place said protection line in a standby mode.

**11. (Previously Presented)** The arrangement of claim 1 wherein said signals that flow to in said framer in said first I/O module close the last-mentioned framer when a decision by said decision logic module is to place said protection line in an active mode.

**12. (Deleted)**

**13. (Deleted)**

**14. (Deleted)**

**15. (Deleted)**

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**17. (Deleted)**

**18. (Deleted)**

**19. (Original)** The control module of claim 1 wherein said decision logic module accepts or rejects said applied stimulus based on a hierarchical order of the stimuli in said set.

**20. (Original)** The control module of claim 1 wherein said decision logic module accepts or rejects said applied stimulus based on said last-provided user-specified directive and a hierarchical order of the stimuli in said set.

**21. (Deleted)**

**22. (Previously Presented)** The arrangement of claim 1, wherein said decision logic module includes an 8-bit service line register and an 8-bit protection line register, and wherein said service line register has bits 4, 5, 6 and 7 permanently set to 0, where bit 7 is the most significant bit of a number stored in said service line register, and said protection line register has its bits 2, 6, and 7 permanently set to 0, where bit 7 is the most significant bit of a number stored in said protection line register.

**23. (Previously Presented)** A method for controlling whether a service line connected to a first I/O module is in an active mode, and a protection line connected to a second I/O module is in a standby mode, comprising the steps of:

receiving at said second I/O module a stimulus that may cause a change in mode in said service line and in said protection line;

determining, based on a user-specified directive, whether to accept or reject said stimulus;

if said step of determining concludes to accept said stimulus, setting or resetting at least one bit in a first or a second register, inclusively;

comparing a first number that corresponds to bits in said first register to a second number that corresponds to bits in said second register; and

controlling said first I/O module to set said service line to a standby mode, and controlling said second I/P module, which is physically distinct from said first I/O module, to set said protection line to an active state when said first number is greater than said second number.

**24. (Original)** The method of claim 23 where said first register and said second register are 8 bits each.

**25. (Original)** The method of claim 23 wherein said step of setting bits is carried out in accordance with the table

| Stimulus  | bits set        |                           |
|---|-----------------|---------------------------|
|   | second register | first register            |
| Manual switch to make protection line active          | Bit0=1          | Bit0=0                    |
| Manual switch to make service line active             | Bit0=0          | Bit0=1                    |
| Signal degraded condition detected in service line    | Bit1=1; Bit0=0  | Bit0=0                    |
| Signal degraded condition cleared in service line     | Bit1=0          |                           |
| Signal degraded condition detected in protection line | Bit0=0          | Bit1=1; Bit0=0            |
| Signal degraded condition cleared in protection line  |                 | Bit1=0                    |
| Signal failed condition detected in service line      | Bit2=1; Bit0=0  | Bit0=0                    |
| Signal failed condition cleared in service line       | Bit2=0          |                           |
| Forced switch directive from service to protection    | Bit3=1          | Bit3=0                    |
| Forced switch directive from protection to service    | Bit3=0          | Bit3=1                    |
| Signal failed condition detected in protection line   | Bit3=0; Bit0=0  | Bit4=1; Bit3=0;<br>Bit0=0 |
| Signal failed condition cleared in protection line    |                 | Bit4=0                    |
| Lockout   |                 | Bit5=1                    |
| Release   | Bit2=0; Bit0=0  | Bit5=0; Bit3=0;<br>Bit0=0 |

**26. (Currently Amended)** An I/O module, designated an A module, including a line interface unit adapted to be connected to a type A line, a framer connected to the line interface unit, an ATM processing units interposed between the framer and an ATM port of said I/O module, which port is adapted to be connected to an ATM switch, and a processor coupled to the framer and the ATM processing unit, characterized in that:

said processing unit determines, based on information derived from said line interface unit, or from signals arriving at said ATM port, whether said framer should be closed, or opened, and when said processing unit determines that said framer should be open said processing unit sends a signal to said ATM port to close a framer of another I/O module, designated a B module, which is physically distinct from said A module.

**27. (Previously Presented)** The A-designated I/O module of claim 26 where said B module is connected to a type B line, where type A line and type B line carry signal from a common point.

**28. (Previously Presented)** The A module of claim 26 where said type A stands for a service signal line, and type B stands for a protection signal line, or vice versa.

**29. (New)** An arrangement comprising:

- an ATM switch fabric;
- a controller associated with said ATM switch fabric for controlling operation of said ATM switch fabric,
- a first I/O circuit card, connected to said ATM switch fabric and having a framer to which a protection line is connected;
- a second I/O circuit card, connected to said ATM switch fabric and having a framer to which a service line is connected, said second I/O circuit card being physically distinct from said first I/O circuit card; and
- a decision logic module within said first I/O module that is adapted to respond to whichever stimulus is applied thereto from a set including user-specified directives, operational state information of the service line, and operational state information of the protection line, which module develops a signal that flows to said framer within said first

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I/O module and a signal that flows to said second I/O module, to direct said service line to be in an active state or in a standby state and, correspondingly, to direct said protection line to be in a standby state or in an active state.